

Application No.: 10/814,917
Docket No.: UC0420 US NA

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REMARKS

Status of the Application

Claims 1-9 and 13-20 are pending. Claims 1-9, 13-15, and 17-20 stand rejected. Claim 16 is allowed.

Rejection under 35 U.S.C. § 102/103

Claims 1-7, 13, 14, 17 and 18 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. 5,300,575 ("Jonas"). This rejection is respectfully traversed.

Jonas is related to dispersions of polythiophenes having a specific structure unit. The Examiner has pointed to example 7 of Jonas, indicating that polystyrene sulfonic acid reads on Applicants' colloid-forming polymeric acid. Applicants respectfully submit that polystyrene sulfonic acid is a water-soluble acid and is not a colloid-forming polymeric acid, as defined at page 3, lines 6-8, of Applicant's specification. Furthermore, with respect to Claims 4 and 5, Jonas does not teach or suggest a composition with polypyrrole or polyaniline, respectively.

Further, Applicants submit that Applicants' compositions, buffer layers, and devices are not the same as or obvious from the teachings of Jonas. As shown in Table 1, on page 28, there is a surprising and unexpected increase in the efficiency of devices made with Applicants' compositions.

Applicants respectfully submit that this rejection has been overcome and request that it be withdrawn.

Rejections under 35 U.S.C. § 103

(1) Jonas in view of Otagawa

Claims 8, 9, 15, 19 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 5,300,575 ("Jonas"), in view of U.S. 5,002,700 ("Otagawa"). This rejection is respectfully traversed.

Otagawa teaches the electropolymerization of aniline onto an electrode substrate in the presence of an organic dopant having at least one sulfonic acid group. Possible organic dopants are listed at column 3, line 67, to column 4, line 7. However, the product of Otagawa is a polyaniline-coated electrode. Otagawa does not teach the formation of an aqueous dispersion, as

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recited in Applicants' Claims 8 and 9, or a buffer layer made from such aqueous dispersion, as recited in Applicants' Claim 15. Applicants can find no teaching or suggestion in either Jonas or Otagawa, that would lead one of ordinary skill in the art to select one polymeric acid listed as possible in the electropolymerization of aniline, and substitute it for a polymeric acid used in the chemical polymerization of 3,4-ethylenedioxythiophene.

Furthermore, there is no teaching in either Jonas or Otagawa of a method in which a polyaniline doped with a non-polymeric acid is combined with a colloid-forming polymeric acid, as recited in Applicants' Claims 19 and 20.

Applicants further point to the results in Table 1, on page 28, as a showing of unexpected results. The dramatic increase in the efficiency of devices made with Applicants' compositions is neither taught nor suggested by Jonas or Otagawa, taken individually or together.

Applicants respectfully submit that this rejection has been overcome and request that it be withdrawn.

(2) Otagawa in view of Jonas and Han.

Claims 1-9, 13-15, and 17-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 5,002,700 ("Otagawa"), in view of U.S. 5,300,575 ("Jonas") and U.S. 5,185,100 ("Han"). This rejection is respectfully traversed.

Han relates to electrically conductive polymers doped with one or more non-oxidizing protonic acids. Although Han teaches than more than one acid can be used, this alone does not overcome the deficiencies of Otagawa and Jonas, as discussed above. There is no suggestion in any one or combination of these references that teaches the specific selection of a conductive polymer doped with a non-polymeric acid and then combined with a colloid-forming polymeric acid. As discussed above, the unexpected results of this particular combination can be seen in Table 1 of the instant application.

Applicants respectfully submit that this rejection has been overcome and request that it be withdrawn.

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Conclusion

In view of the foregoing remarks, Applicants submit that the above referenced application is in condition for allowance. In addition to previously allowed Claim 16, a Notice of Allowance for the remaining pending claims 1-9, 13-15, and 17-20 is earnestly requested.

Should the Examiner have questions about the application or the contents of this paper, the Examiner is invited to call the undersigned at the telephone number listed below.

Respectfully submitted,


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